

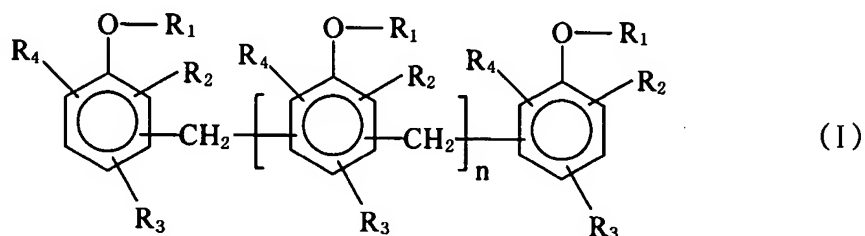
What is claimed is:

1. A flame retardant thermoplastic resin composition comprising:

(A) 100 parts by weight of a thermoplastic resin as a base resin;

(B) about 0.1~100 parts by weight of a phenol resin derivative represented by

5 the following Formula;



10 where R_1 is alkyl of C_{1-34} ; aryl; alkyl-substituted aryl; O-, N-, P- or S-containing alkyl; O-, N-, P- or S-containing aryl; or O-, N-, P- or S-containing alkyl-substituted aryl; R_2 , R_3 , and R_4 are hydrogen, alkyl of C_{1-34} ; aryl; alkyl-substituted aryl; O-, N-, P- or S-containing alkyl; O-, N-, P- or S-containing aryl; or O-, N-, P- or S-containing alkyl-substituted aryl; and n is an integer of 1 to 10,000; and

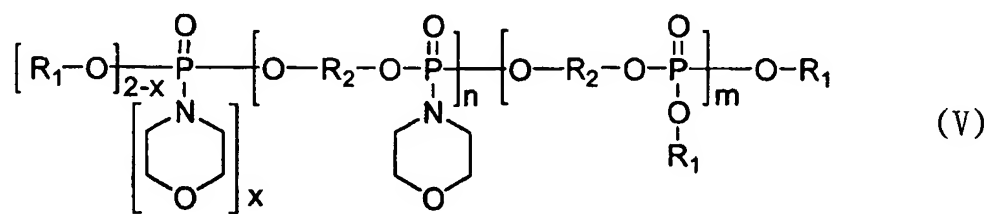
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(C) about 1~50 parts by weight of a phosphoric acid ester morpholide compound.

2. The flame retardant thermoplastic resin composition as defined in claim 1, wherein said base resin is selected from the group consisting of polyacrylonitrile-butadiene-styrene copolymer (ABS resin), rubber modified polystyrene resin (HIPS), acrylonitrile-styrene-acrylate copolymer (ASA resin), methacrylate-butadiene-styrene copolymer (MBS resin), acrylonitrile-ethacrylate-styrene copolymer (AES resin), polycarbonate (PC), polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyvinyl chloride (PVC), polymethyl methacrylate (PMMA), polyamide (PA), and a
25 copolymer thereof and an alloy thereof.

3. The flame retardant thermoplastic resin composition as defined in claim 1, wherein said phenol resin derivative is selected from the group consisting of o-cresol novolak epoxy resin, phenol epoxy resin and a mixture thereof.

5 4. The flame retardant thermoplastic resin composition as defined in claim 1, wherein said phosphoric acid ester morpholide compound is represented by the following Formula:



10 where R_1 is a C_{6-20} aryl group or an alkyl-substituted C_{6-20} aryl group, R_2 is a C_{6-30} aryl group or an alkyl-substituted C_{6-30} aryl group, x is 1 or 2, and n and m are number average degree of polymerization and $n+m$ is 0 to 5.

15 5. The flame retardant thermoplastic resin composition as defined in claim 1, where R_1 is phenyl group or an alkyl-substituted phenyl group, where the alkyl is methyl, ethyl, isopropyl, t-butyl, isoamyl or t-amyl and R_2 is a C_{6-30} aryl group or an alkyl-substituted C_{6-30} aryl group which is a derivative from resorcinol, hydroquinone, or bisphenol-A.

20 6. The flame retardant thermoplastic resin composition as defined in claim 1, further comprising an additive selected from the group consisting of an impact modifier, a heat stabilizer, an oxidation inhibitor, a light stabilizer, and an inorganic filler such as talc, silica, mica, glass fiber, an organic or inorganic pigment and/or dye up to about 50 parts by weight as per 100 parts by weight of the base resin.

7. A molded article prepared by the flame retardant thermoplastic resin composition of claim 1.

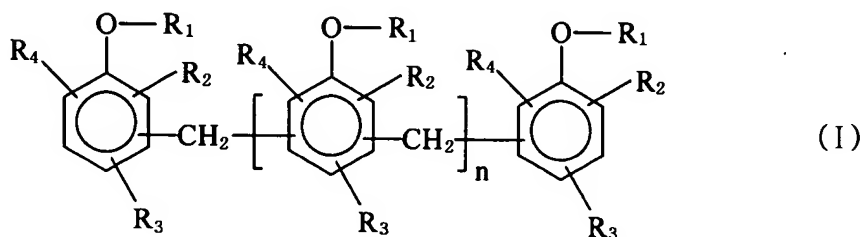
8. A molded article prepared by the flame retardant thermoplastic resin composition of claim 4.

9. A flame retardant thermoplastic resin composition comprising:

(A) 100 parts by weight of a thermoplastic resin as a base resin;

(B) about 0.1~100 parts by weight of polyphenylene ether;

(C) about 0.1~100 parts by weight of a phenol resin derivative represented by the following Formula (I);



where R_1 is alkyl of C_{1-34} ; aryl; alkyl-substituted aryl; O-, N-, P- or S-containing alkyl; O-, N-, P- or S-containing aryl; or O-, N-, P- or S-containing alkyl-substituted aryl; R_2 , R_3 , and R_4 are hydrogen, alkyl of C_{1-34} ; aryl; alkyl-substituted aryl; O-, N-, P- or S-containing alkyl; O-, N-, P- or S-containing aryl; or O-, N-, P- or S-containing alkyl-substituted aryl; and n is an integer of 1 to 10,000; and

(D) about 0.1~50 parts by weight of a phosphoric acid ester morpholide compound.

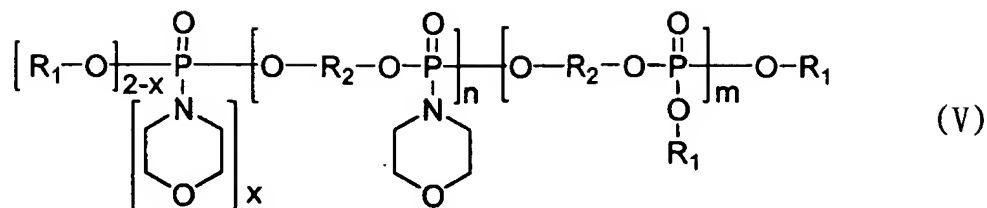
10. The flame retardant thermoplastic resin composition as defined in claim 9, further comprising up to about 5.0 parts by weight of an anti-dripping agent based on 100 parts by weight of the base resin.

5 11. The flame retardant thermoplastic resin composition as defined in claim 10, wherein said anti-dripping agent is a fluoride resin.

12. The flame retardant thermoplastic resin composition as defined in claim 9, wherein said base resin is selected from the group consisting of polyacrylonitrile-
10 butadiene-styrene copolymer (ABS resin), rubber modified polystyrene resin (HIPS), acrylonitrile-styrene-acrylate copolymer (ASA resin), methacrylate-butadiene-styrene copolymer (MBS resin), acrylonitrile-ethacrylate-styrene copolymer (AES resin), polycarbonate (PC), polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyvinyl chloride (PVC), polymethyl
15 methacrylate (PMMA), polyamide (PA), and a copolymer thereof and an alloy thereof.

13. The flame retardant thermoplastic resin composition as defined in claim 9, wherein said phenol resin derivative is selected from the group consisting of o-cresol novolak epoxy resin, phenol epoxy resin and a mixture thereof.

20 14. The flame retardant thermoplastic resin composition as defined in claim 9, wherein said phosphoric acid ester morpholide compound is represented by the following Formula (V):



where R_1 is a C_{6-20} aryl group or an alkyl-substituted C_{6-20} aryl group, R_2 is a C_{6-30} aryl group or an alkyl-substituted C_{6-30} aryl group, x is 1 or 2, and n and m are number average degree of polymerization and $n+m$ is 0 to 5.

15. The flame retardant thermoplastic resin composition as defined in claim 14, where R_1 is phenyl group or an alkyl-substituted phenyl group, where the alkyl is methyl, ethyl, isopropyl, t-butyl, isoamyl or t-amyl and R_2 is a C_{6-30} aryl group or an alkyl-substituted C_{6-30} aryl group which is a derivative from resorcinol, hydroquinone, or bisphenol-A.

16. The flame retardant thermoplastic resin composition as defined in claim 10, further comprising an additive selected from the group consisting of an impact modifier, a heat stabilizer, an oxidation inhibitor, a light stabilizer, and an inorganic filler such as talc, silica, mica, glass fiber, an organic or inorganic pigment and/or dye up to about 50 parts by weight as per 100 parts by weight of the base resin.

17. A molded article prepared by the flame retardant thermoplastic resin composition of claim 9.

18. A molded article prepared by the flame retardant thermoplastic resin composition of claim 14.